AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A fluid dynamic bearing system comprising:

a stationary sleeve;

a rotating shaft axially disposed through the sleeve;

a journal gap between the shaft and sleeve, said gap defined by first and second interfacial surfaces between the shaft and sleeve;

at least one set of fluid dynamic grooves formed on the first interfacial surface of the journal gap; and

at least one step defined on the second interfacial surface of the journal gap and extending in a non-axial direction, wherein the at least one step reduces the journal gap in a localized region ~~of the at least one set of fluid dynamic grooves~~, and wherein the sleeve and shaft are operable to move axially relative to each other during operation by, at least in part, hydraulic force generated by interaction of the at least one set of fluid dynamic grooves and the step with a fluid disposed in the gap, such that the at least one step moves ~~toward~~ away from an apex of the at least one set of fluid dynamic grooves;

such that the hydraulic force maintains the stationary sleeve and the rotating shaft in an substantially fixed relative axial position with respect to each other during operation despite viscosity changes in the fluid which would otherwise cause the stationary sleeve and the rotating shaft to move from the substantially fixed axial position.

Claim 2 (cancelled)

Claim 3 (currently amended): The fluid dynamic bearing system according to claim [[2]]1, wherein the fluid dynamic grooves are asymmetric to establish pumping pressure toward an end of the shaft.

Claim 4 (currently amended): The fluid dynamic bearing system according to claim [[2]]1, wherein the at least one step comprises a circumferential raised surface on the second interfacial surface.

Claim 5 (original): The fluid dynamic bearing system according to claim 4, wherein the at least one step is opposite and offset axially from the at least one set of fluid dynamic grooves.

Claim 6 (withdrawn): The fluid dynamic bearing system according to claim 5, wherein the first interfacial surface of the gap comprises an outer diameter of the shaft, and the second interfacial surface comprises an inner diameter of the sleeve.

Claim 7 (withdrawn): The fluid dynamic bearing motor according to claim 1, wherein the outer diameter of the shaft further comprises two sets of fluid dynamic grooves and the inner diameter of the sleeve further comprises one step located across from one of the two sets of grooves.

Claim 8 (withdrawn): The fluid dynamic bearing motor according to claim 6, wherein the outer diameter of the shaft further comprises two sets of fluid dynamic grooves and the inner diameter of the sleeve further comprises two steps, each of the steps being defined, at least in part, across from one of the sets of grooves.

Claim 9 (original): The fluid dynamic bearing motor according to claim 2, wherein the first interfacial surface of the gap comprises an inner diameter of the sleeve and the second interfacial surface comprises an outer diameter of the shaft.

Claim 10 (withdrawn): The fluid dynamic bearing motor according to claim 9, wherein the inner diameter of the sleeve further comprises two sets of fluid dynamic grooves and the outer diameter of the shaft further comprises the at least one step.

Claim 11 (withdrawn): The fluid dynamic bearing motor according to claim 9, wherein the inner diameter of the sleeve further comprises two sets of fluid dynamic grooves and the outer surface of the shaft further comprises the at least one step.

Claim 12 (currently amended): A fluid dynamic bearing motor comprising:

a stationary sleeve;

a shaft and hub rotatable in relation to the sleeve;

a ~~journal~~ gap defined between the sleeve and the shaft;

a fluid bearing means between the sleeve and the shaft; and

a pressure regulating means cooperating with and opposing the fluid bearing means across the ~~journal~~ gap therefrom to generate hydraulic force by interaction with a fluid disposed between the fluid bearing means and the pressure regulating means to maintain proper axial alignment of the shaft and hub with the sleeve, wherein the shaft and the stationary sleeve are operable to move relative to each other in response to the hydraulic force such that the pressure regulating means moves axially during operation ~~toward~~ away from an apex of the fluid bearing means such that the hydraulic force maintains the stationary sleeve and the rotating shaft in a substantially fixed relative axial position with respect to each other during operation despite viscosity changes in the fluid, wherein the viscosity changes would otherwise cause the stationary sleeve and the rotating shaft to move from the substantially fixed relative axial position.

Claim 13 (currently amended): The fluid dynamic bearing motor according to claim 12, wherein the fluid bearing means comprises at least one set of fluid dynamic grooves formed on a first surface defining the ~~journal~~ gap.

Claim 14 (currently amended): The fluid dynamic bearing motor according to claim 13, wherein the pressure regulating means comprises at least one step formed on a second surface defining the ~~journal~~ gap ~~and is disposed at least in part across the journal from the at least one set of fluid dynamic grooves~~.

Claim 15 (withdrawn, currently amended): A fluid dynamic bearing as claimed in claim 13 wherein the fluid bearing means includes two sets of grooves on the first surface of the ~~journal~~ gap, and the pressure regulating means comprises step defined on a second surface of the ~~journal~~ gap at least partly across from each of the sets of grooves.

Claim 16 (withdrawn): A fluid dynamic bearing as claimed in claim 15 wherein at least one of the two sets of grooves is asymmetric to establish a pressure profile toward a base of the motor.

Claims 17-20 (cancelled)

Claim 21 (cancelled)

Claim 22 (currently amended): The fluid dynamic bearing system of claim 1~~21~~ wherein the at least one step has a first edge in the non-axial direction.

Claim 23 (previously presented): The fluid dynamic bearing system of claim 22 wherein the at least one step has a second edge in an axial direction.

Claim 24 (previously presented): The fluid dynamic bearing system of claim 23 wherein the non-axial direction is approximately perpendicular to the axial direction.

Claim 25 (currently amended): The fluid dynamic bearing system of claim 1 further comprising:

a base having a base surface facing an end surface of the rotating shaft and separated therefrom during operation.

Claim 26 (cancelled)

Claim 27 (currently amended): The fluid dynamic bearing system of claim 25~~26~~ wherein the base includes a counterplate and the base surface is a surface on the counterplate.

Claim 28 (currently amended): The fluid dynamic bearing system of claim 25 ~~further comprising:~~

~~a fluid disposed between the rotating shaft and the stationary sleeve~~ such that during operation the at least one set of fluid dynamic grooves generates hydraulic pressure in the fluid between the base surface and the rotating shaft to exert a thrust force on the end of the rotating

shaft to at least partially effect the axial movement of the stationary sleeve and the rotating shaft relative to each other.

Claim 29 (previously presented): The fluid dynamic bearing motor of claim 14 wherein the at least one step extends from the second surface in a non-axial direction.

Claim 30 (previously presented): The fluid dynamic bearing motor of claim 29 wherein the at least one step has a first edge in the non-axial direction.

Claim 31 (previously presented): The fluid dynamic bearing motor of claim 30 wherein the at least one step has a second edge in an axial direction.

Claim 32 (previously presented): The fluid dynamic bearing motor of claim 31 wherein the non-axial direction is approximately perpendicular to the axial direction.

Claim 33 (currently amended): The fluid dynamic bearing motor of claim 14 wherein the shaft and the stationary sleeve define a width of the ~~journal~~ gap and the at least one step narrows the width in a localized region of the at least one step wherein the width is measured in a non-axial direction perpendicular to an axial direction.

Claim 34 (cancelled)

Claim 35 (previously presented): The fluid dynamic bearing motor of claim 12 further comprising:

a base having a base surface facing an end of the shaft and separated therefrom during operation.

Claim 36 (previously presented): The fluid dynamic bearing motor of claim 35 wherein the base surface faces an end surface of the shaft.

Claim 37 (previously presented): The fluid dynamic bearing motor of claim 36 wherein the base includes a counterplate and the base surface is a surface on the counterplate.